

Technical Analysis Request 3.6: Assessment of the Potential Benefits and Costs of Long-term Captive Populations on the Mainland and/or Islands

Captive populations of island foxes established and maintained on a long-term basis on the mainland and/or islands could potentially contribute to long-term conservation and recovery efforts. A technical analysis is needed to determine whether the establishment of such captive populations would be beneficial, given the current existing wild and on-island captive populations, and given the primary goal of increasing the viability of wild populations. The following analyses are requested:

1. Identify and describe the potential benefits, costs, and major issues associated with the following strategies (or combinations thereof) for maintaining captive populations of island foxes:

- a. using existing on-island facilities
- b. expanding on-island facilities
- c. using existing space in mainland facilities (*e.g.*, zoos)
- d. constructing new mainland facilities for island foxes

To the extent possible, quantify, or at least rank, the benefits (*e.g.*, % reduction in risk of extinction) and costs. Where possible, document any associated issues as part of this effort. This analysis should consider and incorporate where appropriate the results of the risk analysis completed by Fritcher and Mazet [Fritcher, D., and J. Mazet. 2004. Risk Analysis for Island Fox (*Urocyon littoralis*) Inter-island and Island-mainland-island Movements. 17 June 2004]. The analysis should also consider the potential value of one or more long-term redundant populations independent of the status of the wild populations.

2. Identify to the extent possible the necessary steps and their logical progression for establishing and managing captive populations on the mainland [*e.g.*, identifying space, securing permits, addressing on-island and off-island quarantine issues, establishing an oversight strategy (*e.g.*, Species Survival Plan), transporting animals, etc.].

3. If the establishment of mainland populations is determined to be both desirable and practical, identify weighted criteria to be used to prioritize subspecies of island foxes for representation in mainland populations. Potential criteria to consider for each subspecies could include, but are not limited to, genetic attributes, status of wild and captive populations, current and potential risks to on-island wild and captive populations, and any special challenges (*e.g.*, *Spirocerca* and *Angiocaulus* issues).

Relates to: San Miguel, Santa Rosa, Santa Cruz, Santa Catalina.

Technical Expertise Groups involved: PM, CP, WP, G, FH.

Lead Group: CP.

Due Date: May 20, 2005